

Claims

1 1. A method of extracting two-dimensional image shapes
2 from a two-dimensional array of pixel data, the method
3 comprising the steps of:
4
5 selecting intensity vs. pixel information in at least one
6 direction in the vicinity of an edge of the image shape;
7
8 recognizing scans with sufficient contrast as containing
9 edge information;
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11 subjecting acceptable scans to an edge detection
12 algorithm;
13
14 detecting the edge location; and
15
16 generating a locus of points that define the two-
17 dimensional shape of the image from the detected edge
18 values.

1 2. A method according to Claim 1, wherein the edge
2 detection algorithm is a user defined edge detection
3 algorithm that is tailored to the application.

1 3. A method according to Claim 1, wherein the selecting
2 step includes the step of selecting intensity vs. pixel
3 information in a plurality of directions in the vicinity
4 of an edge of the image shape.

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1 4. A method according to Claim 3, wherein the selecting
2 step includes the step of selecting intensity vs. pixel
3 information in at least four directions.

1 5. A method according to Claim 1, wherein said at least
2 one direction is normal to the approximate edge location.

1 6. Apparatus for extracting two-dimensional shape
2 information from an image, of a submicron structure,
3 formed on an array of detectors, comprising:

6 means for determining intensity vs. detector location
7 information for detectors on at least one scan in at
8 least one direction in the vicinity of an edge of the
9 image;

10 means for processing identified scans according to an
11 edge detection algorithm to identify points on the edge
12 of the image; and

13
14 means for generating a locus of points that define the
15 two-dimensional shape of the structure from the
16 identified edge points.

1 7. Apparatus according to Claim 6, wherein the edge
2 detection algorithm is a user defined edge detection
3 algorithm that is tailored to the application.

1 8. Apparatus according to Claim 6, wherein the selecting
2 means includes means for selecting intensity vs. pixel

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3 information ~~in~~ a plurality of directions in the vicinity
4 of an edge of the image shape.

1 9. Apparatus according to Claim 8, wherein the plurality
2 of directions includes at least four directions.

1 10. Apparatus according to Claim 6, wherein said at least
2 one direction is normal to an approximate edge location.

1 11. A program storage device readable by machine,
2 tangibly embodying a program of instructions executable
3 by the machine to perform method steps for extracting
4 two-dimensional image shapes from image data on a pixel
5 array, the method steps comprising:

6
7 selecting intensity vs. pixel information in at least one
8 direction in the vicinity of an edge of the image shape;

9
10 recognizing scans with sufficient contrast as containing
11 edge information;

12
13 subjecting acceptable scans to an edge detection
14 algorithm;

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16 detecting the edge location; and

17
18 generating a locus of points that define the two-
19 dimensional shape of the image from the detected edge
20 values.

1 12. A program storage device according to Claim 11,
2 wherein the edge detection algorithm is a user defined

3 edge detection algorithm that is tailored to the.
4 application.

1 13: A program storage device according to Claim 11,
2 wherein the selecting step includes the step of selecting
3 intensity vs. pixel information in a plurality of
4 directions in the vicinity of an edge of the image shape.

1 14. A program storage device according to Claim 13,
2 wherein the selecting step includes the step of selecting
3 intensity vs. pixel information in at least four
4 directions.

1 15. A program storage device according to Claim 11,
2 wherein one of the directions is normal to an approximate
3 edge location.

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